

**Notice of Allowability**

Application No.

09/302,154

Applicant(s)

PEDNAULT, EDWIN PETER  
DAWSON

Examiner

Natalie A. Pass

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Decision by the Board of 14 June 2005.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
JOSEPH THOMAS  
SUPERVISORY PATENT EXAMINER

**DETAILED ACTION**

***Notice to Applicant***

1. This communication is in response to the Decision by the Board filed 14 June 2005.

Claims 1-20 are pending.

***Allowable Subject Matter***

2. The following is an examiner's statement of reasons for allowance:

Claims 1-20 are allowed. The following is an examiner's statement of reasons for allowance:

Independent claims 1-4, 14, 16, and 19 are directed to a device, apparatus and method for constructing segmentation-based models that satisfy constraints on the statistical properties of the segments in which the statistical constraints applied are used as part of an evaluation process done during a generation of the segments that satisfy the statistical constraints.

The closest prior art of record, Apte et al., U.S. Patent Number 5,970,464, teaches presenting a collection of training data records comprising examples of input values that are available to the model together with the corresponding desired output value(s) that the model is intended to predict and generating a fixed set of segments that are equivalent to the rules extracted by the data mining process. However Apte does not teach applying a statistical constraint to a generation of segments in which segments are defined in accordance with the rules extracted during data mining, and in which segments are changed during the interaction with the user, and in which statistical constraints are used as part of an evaluation process during

the generation of the segments. Simoudis et al. U.S. Patent Number 5,692,107, teaches a program storage device readable by a machine, tangibly embodying a program of instructions and generating alternative pluralities of segment models but does not teach applying statistical constraints as part of an evaluation process during the generation of the segments.

In the decision by the Board of Patent Appeals and Interferences mailed 14 June 2005, the prior rejections of claims 1-20 were reversed. The reason for the reversal of device claims 1-4 was, as noted by the Board at page 14 of their decision mailed 14 June 2005, that although the closest prior art references, Apte et al., U.S. Patent Number 5,970,464, and Simoudis et al. U.S. Patent Number 5,692,107, both teach predictive modeling, models that satisfy constraints, and segment generation of a fixed set of segments, that both, alone and in combination, fail to disclose applying statistical constraints “during the generation of the segments” that are used “as part of an evaluation process in the generation of the segments.”

The reason for the reversal of the apparatus claim 14 was, as noted by the Board at page 14 of their decision mailed 14 June 2005, that although the closest prior art references, Apte et al., U.S. Patent Number 5,970,464, and Simoudis et al. U.S. Patent Number 5,692,107, both teach predictive modeling, models that satisfy constraints, and segment generation of a fixed set of segments, that both, alone and in combination, fail to disclose applying statistical constraints “during the generation of the segments” that are used “as part of an evaluation process in the generation of the segments.”

The reason for the reversal of method claims 16 and 19 was, as noted by the Board at page 14 of their decision mailed 14 June 2005, that although the closest prior art references, Apte

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et al., U.S. Patent Number 5,970,464, and Simoudis et al. U.S. Patent Number 5,692,107, both teach predictive modeling, models that satisfy constraints, and segment generation of a fixed set of segments, that both, alone and in combination, fail to disclose applying statistical constraints “during the generation of the segments” that are used “as part of an evaluation process in the generation of the segments.”

Claims 5-13, 15, 17-18, and 20 incorporate the features of claims 1-4, 14, 16, and 19 through dependency, and are also allowed for the same reasons given above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The cited but not applied reference (EP001168198A2) and Khajanchi article teach the environment of predictive modeling, however fails to disclose all the limitations claimed.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie A. Pass whose telephone number is (571) 272-6774. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

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5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas, can be reached at (571) 272-6776. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (571) 272-3600.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7. Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks**

**Washington D.C. 20231**

or faxed to: **(703) 305-7687.**


For informal or draft communications, please label  
"PROPOSED" or "DRAFT" on the front page of the communication  
and do NOT sign the communication.

After Final communications should be labeled "Box AF."



Natalie A. Pass

January 20, 2006



**JOSEPH THOMAS**  
**SUPERVISORY PATENT EXAMINER**